HOW HERCULES EXPLOSIVES ADVANCE CIVILIZATION

EXPLOSIVES

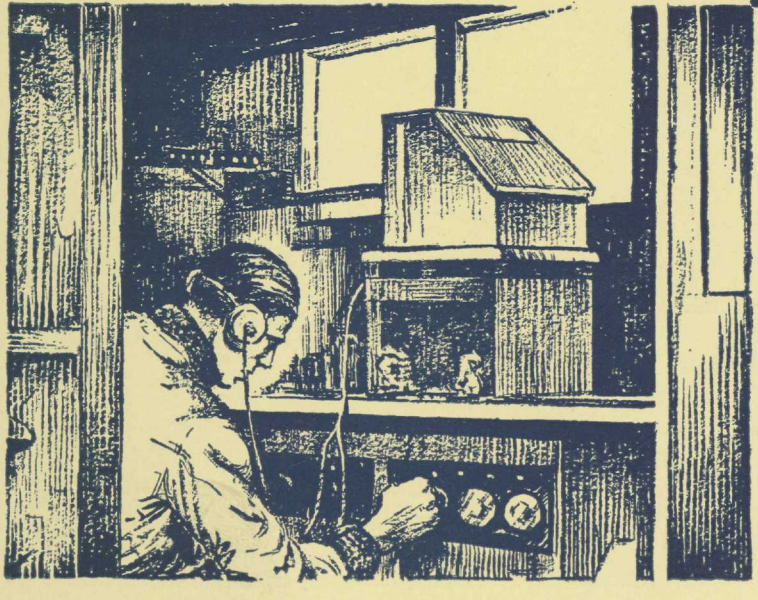
Bring the oil fields to you

WHEN you drive up to a nearby filling station for a supply of gasoline, you are utilizing the mighty force of explosives in our civilization. For, in locating structures, "shooting in" wells, and laying distributing lines, explosives help to bring the oil fields to you.

Yesterday, "oil was where you found it." Today, seismic methods of geophysical prospecting enable the modern geologist to locate favorable structures with reasonable accuracy. How? Explosives initiate earth vibrations which, when recorded, enable the geologist to chart structures.

Thus explosives, long used to "bring in" oil wells and to aid in pipe line construction, are finding another important application in the petroleum industry—another indication that explosives are helping us to enjoy a richer, fuller civilization. In these achievements, Hercules explosives are playing an important part.

HERCULES POWDER COMPANY
INCORPORATED
941 KING STREET · WILMINGTON · DELAWARE

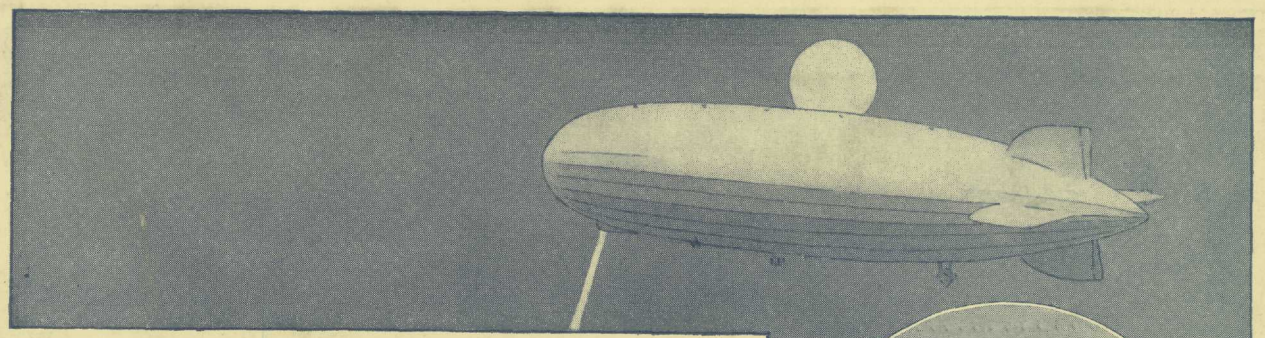


Above: Blasting to determine a possible oil structure by geophysical prospecting (from an actual photograph).

Left: Delicate instruments record the earth vibrations initiated by explosives.

As an engineer, you should know more about explosives. Write for a sample copy of The Explosives Engineer, a monthly magazine which records the growing use of explosives in modern civilization.

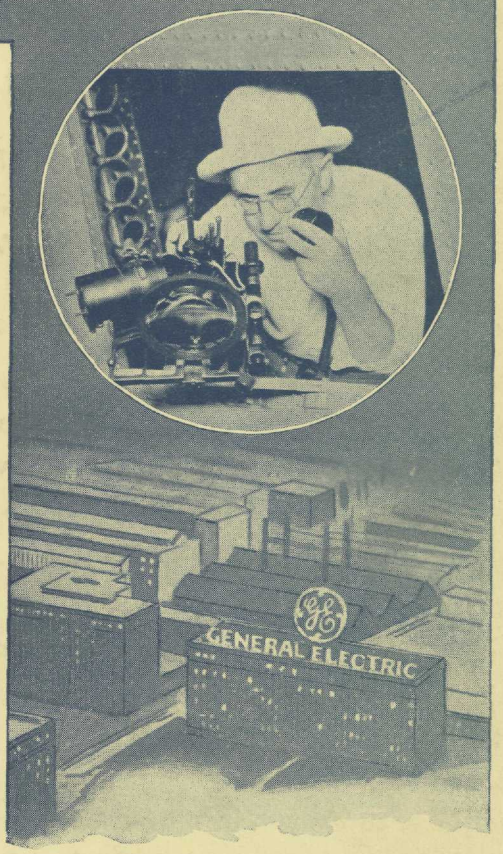
H-6



Talking from the sky on a beam of light

THE huge U. S. Navy dirigible, Los Angeles, is roaring above the General Electric Research Laboratory at Schenectady. On board the airship, an almost invisible beam of light is aimed at a 24-inch mirror-target a half-mile below. The mirror, turning as it follows the dirigible's course, catches the slender beam. Voices transformed into electric impulses in the airship are carried to the mirror by light waves. A photo-electric cell picks up these waves and they are reconverted into sound, which is broadcast to the world by radio.

A "voice on the air," with a "voice from the air"—the official opening of radio station WGY's new 50-kw. transmitter is taking place. One millionth of a watt—generated from the blast of a police whistle in the dirigible—is transmitted to the ground on the beam of light and to a Thyratron tube. The tube magnifies the whistle energy 50,000,000,000,000 times to operate the switches that start the transmitter, five miles away.



(Insert) John Bellamy Taylor, General Electric research engineer, operating projecting apparatus

Receiving mirror on roof of General Electric Research Laboratory

Thus was "narrowcasting," a possible means of secret communication, recently demonstrated to Military and Naval experts by General Electric engineers. The future will demonstrate its commercial value. Electrical developments such as this are largely the accomplishments of college-trained engineers. They are leading the way to even greater progress in the electrical industry and are helping to maintain General Electric's leadership in this field.

95-955DH

GENERAL ELECTRIC